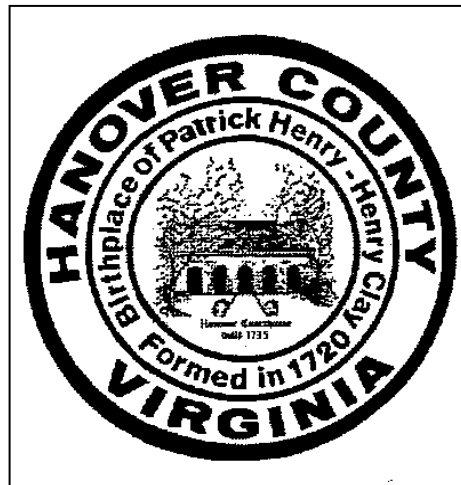


Hanover County

Application and Procedures for

SITE PLAN APPROVAL

**See Page 5 for Fee Submittal Procedure



County of Hanover Department of Planning
7516 County Complex Road
P.O. Box 470
Hanover, VA 23069
(804) 365-6171(p) (804) 365-6540(f)
www.hanovercounty.gov

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APPENDIX

Department of Public Works

- Project Information and Tracking Sheet
- Stormwater Computation Forms Link
- Water Quality Impact Assessment Form Link
- Standard Erosion and Sediment Control Notes
- Organic Mulch Materials and Application Rates and Liming Requirements
- Seeding Mixtures, Rates, and Dates
- Acceptable Temporary Seeding Plant Materials
- Land Disturbance Permit

Planning Department

- Tree Canopy Chart
- Trees **not** recommended for use as landscaping

This application is for use by all applicants for site plan approval, including commercial, industrial, and multi-family residential. **Requests for amendments to approved site plans should also be made with this application.**

Because of the necessity for accurate boundaries, topography drawn to 2-foot contours, hydrological computations, and detailed locational information for improvements, **it may be required that the site plan be prepared by an appropriate professional (engineer, surveyor, architect, or landscape architect). (Please check with the Departments of Public Works and Public Utilities for professional requirements.)** You are also advised that any conveyance of a portion of the subject property may require subdivision review and approval.

Should you have any questions during the course of preparation of a site plan for submittal, please contact the Planning staff at 365-6171. The staff is available to assist you with any questions or problems.

Approval Process for Site Plan Applications

Pre-Application Meeting (Optional)

- These meetings are typically held on the 2nd and 4th Wednesdays of the month. (See Site Plan Review Schedule - <http://www.co.hanover.va.us/planning/splanpro.htm>) **These meetings are strongly encouraged** but not required.

Submit Application for Approval

- Application deadlines are typically the second and fourth Tuesday of each month. (See Site Plan Review Schedule - <http://www.co.hanover.va.us/planning/splanpro.htm>)
- Submit application, checklists, and 11 sets of site plans and landscape plans. The required fees must be submitted within fourteen (14) days of the date of notification of acceptance.

Agency Review of Complete Plans

- Applications are reviewed by all agencies for completeness the day after the submission deadline. Applications that are determined incomplete will be returned to the applicant. (For example, a site plan will be returned if a required landscaping plan or drainage calculations are not included in the submittal.)
- The Planning Department will circulate complete plans to all affected agencies for review and comment. A comment letter from each agency will be sent to the applicant's engineer based on the date of acceptance. (See Site Plan Review Schedule - <http://www.co.hanover.va.us/planning/splanpro.htm>)

Staff/Applicant Meeting

- The Applicant or Engineer is encouraged to call or meet with individual departments prior to the staff/applicant plan meeting to ask questions and resolve issues.
- Date of meeting is determined by the date of submittal (See Site Plan Review Schedule - <http://www.co.hanover.va.us/planning/splanpro.htm>). The Applicant may choose to waive the meeting, if contact with individual review departments has addressed any outstanding concerns.
- Following the meeting, staff will determine whether the resubmittal will be handled as Routine or Complex.

Resubmittal of Revised Plans by Applicant

- Includes resubmittal form, 14 sets of plans, written responses to comments, and marked-up set of plans
- If a plan is designated for Routine review, comments or approval will be issued within 7-10 calendar days
- If a plan is designated for Complex review, comments or approval will be issued within 15-20 calendar days

Revisions Still Required

Pre-3rd submittal meeting

- Applicant and engineer must have a meeting with agencies with outstanding comments prior to submission for a third review, unless waived by all departments.
- Meetings typically held the second and fourth Thursday of each month.

Resubmittal of Revised Plans by Applicant

- Plans are routed to affected agencies and reviewed within 7-10 days.
- Comment Letter sent or applicant is notified that plans are approvable.

Approvable Site Plans

Site Plan Approval

- The Deputy Director will sign 14 prints of the site plan upon approval. The County will return two copies to the Applicant. Applicant must keep one copy of the approved site plan on site during construction. If the Applicant would like more than two signed copies of the plan, additional copies should be provided by the Applicant.
- No work other than clearing, shall occur onsite before final site plan approval. **(Unless an early land disturbance permit has been issued by the Department of Public Works, grading and grubbing are not permitted before site plan approval.)**

Hanover County Planning Department Application

Request for SITE PLAN REVIEW – 1ST SUBMISSION

NEW AMENDMENT

Please type or print using **black ink**.

SPR- _____

NAME OF PROJECT:	
-------------------------	--

SITE PLAN INFORMATION

Site Acreage: _____ Current Zoning: _____ Rezoning, CUP, & SE Case No.(s) (if applicable): _____ Existing Square Footage of Structure(s): _____ Proposed Square Footage of Structure(s): _____	GPIN(s): _____ Location: _____ Name of subdivision (if applicable): _____ Magisterial District: _____
---	--

ATTACHMENTS - For ALL REQUESTS you must submit the following:

- | | |
|--|--|
| <input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/> | <p>a) Completed Site Plan Checklist</p> <p>b) Eleven (11) sets of plans, folded no larger than 9" x 12" and one (1) 8 1/2" x 11" reduction
 For residential site plans, submit thirty (30) sets of plans</p> <p>c) Eleven (11) copies of landscape plan, if required</p> <p>d) Verification of submittal of FAA Form 7460 (if applicable). (FAA at Richmond Airport 804-222-7494)</p> <p>e) Department of Public Works Project Information and Tracking Sheet</p> <p>f) Acknowledgement of Application Fee Payment Procedure</p> |
|--|--|

APPLICANT INFORMATION

As owner, I hereby authorize submission of this site plan. Property Owner _____ Address _____ Signature _____	Telephone No. _____ Fax No. _____ Email Address _____
--	---

Developer _____ Contact Name _____ Address _____ Signature _____	Telephone No. _____ Fax No. _____ Email Address _____
---	---

Engineer _____ Contact Name _____ Address _____	Telephone No. _____ Fax No. _____ Email Address _____
---	---

PLEASE DIRECT CORRESPONDENCE/ QUESTIONS TO: Owner Developer Surveyor/Engineer

As owner/developer/surveyor/engineer of this property, I hereby authorize submission of this site plan and certify that this application is complete and accurate to the best of my knowledge.

Name (Print): _____

Signature: _____ Date: _____

STAFF USE ONLY:

Accepted by: _____ Fee Amount Due: _____ Date: _____ HTE#: _____

ACKNOWLEDGEMENT OF APPLICATION FEE PAYMENT PROCEDURE

I hereby acknowledge that this application is not complete until the payment for all applicable application fees has been received by the Hanover County Planning Department. The Hanover County Planning Department shall notify me by mail (at the address listed below) of the applicable fee(s) at such time that they determine that the application is complete and acceptable. I acknowledge that I am responsible for ensuring that such fees are received by the Hanover County Planning Department within fourteen (14) days of the date of the notification letter. Non-payment of the fee will result in disapproval of the plan. No further submittals of plans will be accepted, and no plans will be approved until the fee is paid.

Should my application be accepted, my fee payment will be due by _____. (To be filled in by a Planning Staff member.)

Signature of applicant/authorized agent _____ Date _____
Print Name _____

Signature of applicant/authorized agent _____ Date _____
Print Name _____

Address to which notification letter is to be sent:

FEES

- Commercial/ Industrial Site Plan - \$1100
- Residential - \$1000 + \$10/unit
- Amendment (after final approval) - \$100 + \$50/acre
- Landscaping Plan - \$50/acre

FOR STAFF USE ONLY:

Fees: Base Fee _____
 Acreage Fee _____
 Landscaping Fee _____
 TOTAL _____

Hanover County Planning Department Application

Request for SITE PLAN APPROVAL - RESUBMISSION

Submittal: 2nd 3rd 4th 5th Other

CASE #: _____

NAME OF SITE:	
----------------------	--

SITE PLAN INFORMATION

Site Acreage: _____	GPIN(s): _____
Rezoning, CUP, & SE Case No.(s) (if applicable): _____	Location: _____
3 rd Submittal Meeting Date (Required): _____	

APPLICANT INFORMATION

Property Owner _____	Telephone No. _____
Address _____	Fax No. _____
_____	Email Address _____

Developer _____	Telephone No. _____
Contact Name _____	Fax No. _____
Address _____	Email Address _____
_____	_____

Engineer _____	Telephone No. _____
Contact Name _____	Fax No. _____
Address _____	Email Address _____
_____	_____

PLEASE DIRECT CORRESPONDENCE/ QUESTIONS TO: Owner Developer Surveyor/Engineer

As owner/developer/surveyor/engineer of this property, I hereby certify that this application is complete and accurate to the best of my knowledge.

Name (Print): _____

Signature: _____ Date: _____

ATTACHMENTS – For ALL REQUESTS you must submit the following:

<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>a) Fourteen (14) copies of the final site plan, folded no larger than 9" x 12 "</p> <p>b) Fourteen (14) copies of landscape plan and two (2) lighting plans, if required</p> <p>c) Provide written responses which address each review comment and where on the site plan it has been addressed. In such instances that the comment is not or cannot be addressed, please acknowledge so, and indicate the reason. These response remarks may be "redlined" on the review letter and submitted with the revised plan, or typed below the original review comments if staff has provided comments to you by email. Alternatively, the response remarks may appear in a separate letter with reference to the review comment numbers to which the remarks are in response.</p> <p>d) Return planning marked copy of site plan from previous submittal</p> <p>e) Return site plan sign</p> <p>f) Applicable fee: 3rd Submittal - \$250 4th Submittal - \$350 Subsequent Submittals - \$450</p>
--	--

STAFF USE ONLY: Accepted by: _____ Date: _____ HTE#: _____

SITE PLAN CHECKLIST – DEPARTMENT OF PLANNING

Department of Planning Checklist – Use this checklist to prepare the required Plan.

Yes	No		Staff:	Yes	No												
		<ol style="list-style-type: none"> 1. General Notes to be located on cover sheet, and to include the following information: <ol style="list-style-type: none"> a) Name of Site plan. b) Magisterial District, County and State. c) Name(s) and address(es) of owner(s) and developer. d) Name of surveyor or engineer who prepared the plat. e) Date of completion of the plan and any subsequent revisions. f) Number of sheets and match lines. g) Site Plan number and HTE Project # (ex: SPR-1-13 HTE Project #13-30000001) 2. Located in the bottom right hand corner Information block, to include the following information: <ol style="list-style-type: none"> a) Geographic Parcel Identification Number (GPIN) b) Zoning of Property c) Case numbers for any associated rezoning, CUP, SE, Variance, etc. d) Use of property e) Total site acreage f) Building square footage existing/proposed. g) Parking required and provided h) Loading Space required and provided i) Traffic Zone j) List any applicable Overlay districts for this property 3. A site tabulation chart showing the following: <table style="width: 100%; margin-left: 20px; border: none;"> <tr> <td style="width: 60%;">Buildings</td> <td style="width: 20%; text-align: center;">_____ sq. ft.</td> <td style="width: 20%; text-align: center;">_____ % of site</td> </tr> <tr> <td>Impervious surfaces (parking and drives)</td> <td style="text-align: center;">_____ sq. ft.</td> <td style="text-align: center;">_____ % of site</td> </tr> <tr> <td>Open Space</td> <td style="text-align: center;">_____ sq. ft.</td> <td style="text-align: center;">_____ % of site</td> </tr> <tr> <td>Total</td> <td style="text-align: center;">_____ sq. ft.</td> <td></td> </tr> </table> 4. Approval letters for any zoning, CUP, SE, variance, etc. shall be added to the plans. 5. True North arrow on each sheet of plans. 6. The scale of the site plan shall be as follows: <ol style="list-style-type: none"> a) For projects containing more than 200 acres: not more than 200':1". b) For projects containing 50 to 200 acres: not more than 100':1". c) For projects containing 10 acres to 50 acres: not more than 50':1". d) For projects containing 10 acres or less: not more than 30':1". 	Buildings	_____ sq. ft.	_____ % of site	Impervious surfaces (parking and drives)	_____ sq. ft.	_____ % of site	Open Space	_____ sq. ft.	_____ % of site	Total	_____ sq. ft.				
Buildings	_____ sq. ft.	_____ % of site															
Impervious surfaces (parking and drives)	_____ sq. ft.	_____ % of site															
Open Space	_____ sq. ft.	_____ % of site															
Total	_____ sq. ft.																

7. A location map, at a scale no greater than 1":2000'.
8. All information required for compliance with Chapter 10, Article II, Hanover County Code: Chesapeake Bay Preservation (Certification or Water Quality Impact Assessment)
9. The boundaries of the property involved; County and/or town boundaries; property lines with bearings and distances; existing easements with recordation reference, streets with r/w width and Route number, buildings, and/or waterways; areas affected by Chesapeake Bay preservation requirements; burial sites or cemeteries; and major tree masses.
10. Zoning district boundaries.
11. Provide the owners' names, GPINs, and zoning for all adjacent properties.
12. Topography, at intervals of two (2) feet, unless waived or requested at a greater interval by the Director.
13. Location and dimensions of all off-street parking and loading areas
14. The general location and character of construction of proposed streets, alleys, driveways, curb cuts, entrances, and exits, existing and proposed.
15. Show distance(s) from the centerline(s) of driveway(s) in either direction from the subject site and site boundary lines.
16. Location and method of screening for all outdoor waste receptacles on site. Dumpsters must be screened on all four sides. Provide a detail of the fence enclosure and gate on the plans.
17. The approximate location(s) and size(s) of sanitary and storm sewers, water mains, culverts, and other underground structures, both existing and planned, in or near the project.
18. All existing easements must reference recordation information.
19. Sanitary facilities, if private, including the locations of primary and secondary drainfields.
20. Show all existing electric, telephone, and cable lines.
21. General location of all internal landscape areas.
22. General location, height, and material for all fences, walls, screen plantings, berms, and peripheral landscaping. The dimensions of required perimeter and front buffer(s), if any, shall be shown. (See also Landscape Plan checklist)
23. All requirements of the Department of Public Works, according to the attached checklist.
24. All requirements of the Department of Public Utilities. For the requirements of the Department of Public Utilities, please refer to the Hanover County Water and Sanitary Sewer Standards which are available from the Department of Public Utilities.
25. All requirements of the Virginia Department of Transportation, according to the attached checklist.
26. Proposed location of all non-residential uses, accessory or main. (ex: accessory structures, retaining walls, wells, pedestrian bridges, etc.)
27. Proposed locations and orientation of all proposed detached, free-standing signs, if known.

Additional requirements for residential site plans:

1. The general location of proposed lots, setback lines, and easements, and proposed reservations for parks, parkways, playgrounds, school sites, and open space.
2. A tabulation of the total number of dwelling units of various types in the project, and the overall project density in dwelling units per acre, gross or net, as required by district regulations.

Landscaping Plan

1. Location of existing and proposed landscaping.
2. Plant Schedule indicating:
 - a. Latin and common name
 - b. Number of plants
 - c. Caliper and/or spread
 - d. Individual canopy coverage
 - e. Total canopy coverage
 - f. Staking plan
3. Thoroughfare Buffer calculations in accordance with Sec. 26-264
4. Greenspace Calculations in accordance with Sec. 26-192, if applicable.
5. Canopy calculations in accordance with Sec. 26-192, if applicable.
6. Detail of required landscape screening and/or berm, if applicable.
7. 25' sight triangles at entrances, measured from the edge of right-of-way.

Lighting Plan (Required if site is utilized during the hours of darkness)

1. Location of all existing and proposed exterior light fixtures (building and freestanding) in accordance with Sec. 26-267 through 26-271.
2. Photometric diagram showing illumination levels in all parking areas and at all property lines in accordance with Sec. 26-267 through 26-271.
3. Two (2) copies of fixture cutsheets for each proposed fixture.
4. Light Uniformity Ratio

SITE PLAN CHECKLIST – VIRGINIA DEPARTMENT OF TRANSPORTATION

VDOT Checklist – Use this checklist to prepare the required Plan.

Yes No		Staff: Yes No
	<p>1. At proposed entrances or streets the following is shown:</p> <ul style="list-style-type: none"> a) Typical Sections b) Sight Distance c) Entrance width at end of radius d) Entrance radius e) Type curbing/entrance standards f) Distance to nearest intersection State Route g) Lengths of any required left and right turn lanes, tapers and transitions <p>2. For existing state routes the following is shown:</p> <ul style="list-style-type: none"> a) Route Number b) Street Name c) Pavement Width d) Right of Way Width e) Speed Limit <p>3. VDOT checklist for Subdivision Streets has been completed and is attached if there are streets being constructed for acceptance into the State Secondary System.</p> <p>NOTE: Contact the Development Review Section at VDOT at 752-5513 for checklist and general notes, if necessary, before submitting site plan.</p> <ul style="list-style-type: none"> a) All drainage information requested on the Public Works Checklist has been provided, including complete drainage calculations for all affected existing structures within VDOT right of way. b) All existing and proposed utilities, if within limits of proposed right of way are shown, with details as to location and typical sections. c) Where security lighting is proposed, indicate the following if lighting will be on VDOT right of way or will affect the traveling public: d) Distance of pole from edge of pavement and proposed right of way. e) Distance from pole to center of luminaire. f) Height of luminaire above centerline of roadway. g) Level of illumination. <p>TRAFFIC ENGINEERING</p> <p>(This Section not applicable if site plan proposal will not generate additional traffic.)</p> <p>MAJOR DEVELOPMENTS:</p> <ul style="list-style-type: none"> • Proposed developments with a significant impact on the existing road network will require a traffic impact analysis. VDOT will make the determination if a traffic impact analysis is needed at rezoning or initial submittal. • If a traffic analysis is required, further reviews will not be made until the analysis has been submitted. • All improvements required by the traffic impact analysis to obtain a minimum level of service "D" are shown on the site plan. 	

ALL OTHER SITE PLANS:

1. If no traffic impact analysis was required, complete the following:
 - a) Total Acreage
 - b) Proposed Use
 - c) Size of Building in Sq. Ft.
 - d) Estimated Projected Traffic for Site
 - e) Average Daily Traffic on Adjacent State Route
 - f) On-site circulation patterns shown for potential impact on existing roadway.
 - g) All roadway improvements to accommodate traffic generated by proposed development are shown.
 - h) Existing and proposed traffic control devices are shown, such as pavement marking and signs, if affected.
 - i) Any proposed right of way dedication shown on site plan.
 - j) Adjacent property information shown on plan:
 1. Name of Owner
 2. Location
 3. Current Zoning
 4. Current Use
 5. Total Acreage of Each Adjacent Property

GENERAL NOTES:

Site plans and subdivision plans shall be designed in accordance with the appropriate manuals of the Virginia Department of Transportation:

- a) "Minimum Standards of Entrances to State Highways"-Traffic Engineering Division.
- b) "Subdivision Street Requirements"-Secondary Road Division.
- c) "Road and Bridge Specifications"
- d) "Drainage Manual"-Location and Design Division.
- e) "Land Use Permit Manual"-Maintenance Division.
- f) "Guidelines for Lighting by Permit on State Right of Way"- Maintenance Division.
- g) "Road and Bridge Standards"-Location and Design Division.

These design standards are considered minimal. In keeping with its mission to provide a safe, efficient, and effective ground transportation system, VDOT is obligated to make recommendations that exceed these standards where it is deemed necessary and in VDOT's best interest.

Where a county has adopted standards higher than VDOT standards, the higher standards of the county will prevail.

SITE PLAN CHECKLIST – DEPARTMENT OF PUBLIC WORKS

Department of Public Works Checklist – Use this checklist to prepare the required Plan.

Yes No		Staff:	Yes No
	<p>General Information</p> <ol style="list-style-type: none"> 1. Provide engineers/surveyors/landscape architects name, address, telephone number, and registration seal. 2. Provide the owners and/or developers name, address, and telephone number. 3. Provide a vicinity map. 4. Provide the original plan dates and all revision dates with a brief description of the items revised. 5. Provide titles and numbering for all sheets. 6. Show the location, width, and recordation information for all existing drainage easements. All proposed easements need to be a minimum of 20 feet. 7. Provide all information required for compliance with Chapter 10, Article II, Chesapeake Bay Preservation, Code of Hanover. 8. Provide topography of the parcel(s) and surrounding vicinity, showing existing and proposed contour intervals of two feet or less. Reference source and date of all topography. 9. Provide the location and description of all existing and proposed drainage structures, pipes, roof drains, swales, ditches, curbs, and channels and the direction of flow in each. 10. Show the approximate limits of the 100-year floodplain and provide the FIRM Community-Panel Number. 11. Provide an erosion and sediment control plan in accordance with the Virginia Erosion and Sediment Control Law, Title 10, Chapter 5, Article 4 of the Code of Virginia; VR 625-02-00, Virginia’s Erosion and Sediment Control Regulations; and the Erosion and Sediment Control Ordinance of the Code of Hanover (see additional checklist). 12. Show the limits of all land disturbance associated with the proposed project. 13. If wetlands or hydric soils as per the Hanover County Soil Survey are present, provide a wetlands delineation and verification of the delineation from the Corps of Engineers. Also provide approval from the Corps for your plan if it affects the wetlands. 14. Provide a drainage plan and analysis in accordance with the Hanover County Drainage Design Handbook, Chapter 12 of the Code of Hanover (Floodplain and Drainage Control), VDOT Drainage Manual, and the Erosion and Sediment Control Regulations (see additional checklist). 15. Lot grading plans may be required on flagged residential lots during review of the subdivision construction plans or the building permits. 		

Drainage Plan and Analysis Checklist

1. Provide the drainage area in acres (supported by outlined contour map).
2. Provide runoff coefficients for the pre-developed and post-developed drainage areas. They must reflect the conditions of ultimate development.
3. Provide supporting calculations for the computation of Q2, Q10, and Q100, both pre developed and post-developed where required.
4. Provide supporting calculations for all channels, existing and proposed, natural and man-made, including the following:
 - a) Depth
 - b) Type of Lining
 - c) Mannings "n" Value
 - d) Typical Channel Cross Section
 - e) Side Slope Ratios
 - f) Q2, Q10, Q100, V2, D10
 - g) Longitudinal Slope
 - h) Linings Described by Stations
 - i) Contributing Drainage Areas
 - j) Flow arrows
5. Provide Additional Information As Required on VDOT Standard Form Attached
6. Provide for all detention/retention basins the following:
 - a) Construction Details for the Basin and Outlet Devices.
 - b) Storm Routing for the 2, 10, and 100 Year Storms.
 - c) All basins must have a maintenance agreement. (see attached) This agreement must be approved by DPW and then executed. Before the plans will be approved the deed book and page number must be referenced on the plan.
 - d) Delineate the Approximate 100-Year Storm Elevation.
 - e) Contributing Drainage areas.
 - f) Compliance With All Requirements of Attached Requirement List.
7. Provide for all culverts the following:
 - a) Inverts
 - b) Length
 - c) Type, RCP class III or Bit. Coated CMP(RCP class III only in County easements)
 - d) Headwater Depth
 - e) Discharge protection
 - f) Outlet Velocity
 - g) Diameter
 - h) Design Cover
 - i) Provide Additional Information as Required on VDOT Standard Form Attached

8. Provide for all curb and gutter/storm sewer systems the following:
 - a) Depth and Spread in Gutter
 - b) Length of Throats and Placements of Inlets
 - c) Type of Material
 - d) Diameter (Minimum of 15 inches)
 - e) Velocity (Minimum Allowable of 3 FPS Maintained)
 - f) Capacity (Based on 10-year Storm Event)
 - g) Hydraulic Grade Line Computations Noting Elevations at Key Points (Drop Inlets, Manholes, etc.)
 - h) Concrete Flume Transition Details from Curb to Ditch
 - i) Details of VDOT Standard Structures (Drop Inlets, Curb/Gutter, etc.)
 - j) Provide the profile for the storm sewer in conjunction with any road profiles or other utilities
 - k) Provide Additional Information As Required on VDOT Standard Form Attached
9. Provide details of all special design structures (flumes, basin outlets, energy dissipators, etc.)

Erosion and Sediment Control Plan Checklist

1. Provide a narrative report which includes the following:
2. A brief project description of the nature and purpose of the land disturbing activity, and the amount of grading involved.
 - b) A description of the existing topography, vegetation, and drainage.
 - c) A description of neighboring areas such as streams, lakes, residential areas, roads, etc., which might be affected by the land disturbance.
 - d) A brief description of the soils on the site giving such information as soil, name, mapping unit, erodibility, permeability, depth, texture, and soil structure.
 - e) A description of areas on the site which have potentially serious erosion problems.
 - f) A description of the methods which will be used to control erosion and sedimentation on the site.
 - g) A brief description, including specifications, of how the site will be stabilized after construction is completed.
 - h) A brief summary of storm water management considerations of downstream receiving channels and their condition and adequacy.
 - i) A schedule of regular inspection and repair of erosion and sediment control structures should be set forth.
 - j) Any calculations for the design of such items such as sediment traps, sediment basins, diversions, etc.

3. Provide a vicinity map on the plan.
4. Provide the existing topography of the site on the plan.
5. Show the existing tree lines, grassy areas, or unique vegetation on the plan.
6. Show the boundaries of different soil types on the plan.
7. Provide a North arrow on the plan.
8. Show the areas with potentially serious erosion problems on the plan.
9. Provide the drainage breaks and the direction of flow within the drainage areas on the plan.
10. Provide the proposed topographical changes.
11. Delineate the limits of all clearing and grubbing associated with the proposed project.
12. Show the locations of the erosion and sediment control measures to be used on the site.
13. Provide detail drawings of structural practices used to control erosion and sedimentation.
14. Provide a seeding schedule on the plan. (see attached)
15. Provide Erosion and Sediment Control Notes on the plan. (see attached approved notes)
16. Provide the name of the Certified Responsible Land Disturber (RLD) on the plans.

See website: http://www.dcr.virginia.gov/stormwater_management/es_rld.shtml

Hanover County Department of Public Works Project Information and Tracking Sheet

Project Information

1. Name of Project: _____
2. Site Plan #: _____
3. GPIN #'s: _____
4. Total Area (acres): _____
5. Total Amount of Disturbed Area (acres): _____
6. Total Amount of Existing Impervious Area (ft²): _____
7. Total Amount of Proposed Impervious Area (ft²): _____
8. Total Amount of Impervious Area on site (ft²): _____
9. % Imperviousness of site: _____

10. Hydrologic Unit Code: _____

11. Is Area within a Chesapeake Bay Act Area (RMA)? Yes No

12. Does project contain Resource Protection Area? Yes No

• If yes, is there any encroachment in this buffer? Yes No

• If yes, what is the amount of area (ft²)? _____

13. Does project contain wetlands? Yes No

• If yes, will there be any wetlands impacts? Yes No

• If yes, what is the amount of impact (ft²)? _____

14. Does the project currently contain stormwater basins? Yes No

• If yes, provide the Deed Book/Page # of Maintenance Agreement: Deed Book _____ Page # _____

• If yes, what type of basin is it? Regional Private

• If Regional, what is the Basin ID? _____

15. Will this project require a basin? Yes No

• If yes, what kind of basin will it be? Regional Private

• If the basin is Regional, what is its Basin ID? _____

• If private, the basin will need to have a Maintenance Agreement recorded prior to plan approval

Owner/Developer/Engineer Information

Owner's Name and Address: _____

Phone #: _____ Fax #: _____

Email address: _____

Engineer's Name and Address: _____

Phone #: _____ Fax #: _____

Email address: _____

Developer's Name and Address: _____

Phone#: _____ Fax #: _____

Email address: _____

Please go to the following links to find forms to be completed and submitted with this application:

<http://www.extranet.vdot.state.va.us/locdes/electronic%20pubs/2002%20Drainage%20Manual/pdf/drain-manual-chapter-07.pdf>

see Page 3

<http://www.extranet.vdot.state.va.us/locdes/electronic%20pubs/2002%20Drainage%20Manual/pdf/drain-manual-app-08.pdf>

see page 5, Appendix A

<http://www.extranet.vdot.state.va.us/locdes/electronic%20pubs/2002%20Drainage%20Manual/pdf/drain-manual-chapter-09.pdf>

see Appendix 9B-1, 2, and 3

You may also call the Hanover County Planning Department (804-365-6171) or Public Works Department (804-365-6181) to obtain copies of these forms.

The following is a link to a map of Virginia's 6th Order NWBD Hydrologic Units (VAHU6) for Hanover:

http://www.co.hanover.va.us/works/envirmnt_nwbd6-map.pdf

The following is a link to the Water Quality Impact Assessment form:

http://www.co.hanover.va.us/PW/Water_Quality_Impact_Assessment_Form.pdf

Department of Public Works

Standard Erosion and Sediment Control & Pollution Prevention Plan Notes

1. Prior to commencement of any land disturbance activities, a land disturbance permit must be issued by the Department of Public Works. An approved Erosion and Sediment Control Plan and bonding of the erosion and sediment control measures is required for permit issuance.
2. A separate land disturbance permit or an ESC plan amendment to this plan must be submitted to, and approved by Hanover County DPW prior to any off-site land disturbance (borrow / filling / disposal activities) associated with this project. If the off-site portion of the project is located within Hanover County, additional E&S inspection fees will be required.
3. Contact the Department of Public Works' Environmental Compliance Manager, 365-6181, a minimum of 48 hours prior to commencement of land disturbance activities. A pre-construction meeting is required unless it is waived by the Environmental Compliance Manager.
4. No work may occur outside the limits of disturbance shown on the approved plans. Working outside of the limits of disturbance shown on the approved plans will result in a Stop Work Order being issued with the potential for fines being levied.
5. Permanent or temporary soil stabilization shall be applied to denuded areas within seven (7) days after final grade is reached on any portion of the site.
6. Temporary soil stabilization shall be applied within seven (7) days to denuded areas that may not be at final grade but will remain dormant for longer than thirty (30) days.
7. During construction of the project, soil stock piles shall be stabilized or protected with sediment trapping measures.
8. Stabilization measures shall be applied to earthen structures such as dams, dikes, and diversions immediately after installation.
9. Erosion and sediment control measures shall be constructed and installed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance takes place. Initial clearing must be the minimum required to install erosion and sediment control measures and devices. Should either the Erosion and Sediment Control Narrative or Sequence of Construction conflict with this requirement, the conflicting portions of either will be determined to be invalid.
10. A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that, in the opinion of the County Engineer or his designated agent, is uniform mature enough to survive and will inhibit erosion.
11. Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
 - a. No more than 500 linear feet of trench may be opened at one time
 - b. Excavated material shall be placed on the uphill side of trenches
 - c. Effluent from dewatering operations shall be trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.
 - d. Restabilization shall be in accordance with the above Notes.

12. All applicable federal, state, and local regulations pertaining to working in or crossing live watercourses shall be met.
13. Where construction vehicle access routes intersect paved public roads, provisions shall be made to minimize the transport of sediment by tracking onto the paved surface. Where sediment is transported onto a public road surface, the road shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a disposal area.
14. It shall be the owner's responsibility to inspect erosion control devices periodically and after every erodible rainfall. Any necessary repairs or clean up to maintain the effectiveness of the erosion control devices shall be made immediately.
15. Additional erosion and sediment control measures and devices may be required by the Director of Public Works or his designated agent if deemed necessary.
16. The owner shall install additional erosion and sediment control devices and measures if the Registered Land Disturber determines that such additional devices and measures are necessary.
17. All erosion control devices shall be in place and functional at all times and if removed for construction progress, shall be replaced by the close of each workday.
18. Final removal of erosion control devices shall not occur until the Director of Public Works or his designated agent deems the site stabilized.
19. Permanent seeding is to be in accordance with the accompanying seeding schedule.
20. Construction site operators are required to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.
21. Construction site operators are required to control the transport of dust and other wind born contaminants as a result of land-disturbing, demolition and construction activities. The operator shall prevent the surface and air movement of airborne substances in accordance with STD and SPEC 3.39 of the Virginia Erosion and Sediment Control Handbook or as approved by the Director of Public Works or his designated agent.

ORGANIC MULCH MATERIALS AND APPLICATION RATES

ORGANIC MULCH MATERIALS AND APPLICATION RATES			
	RATES		
MULCHES	Per Acre	Per 1000 sq. ft	NOTES
Straw or Hay	1 ½ - 2 tons (Minimum 2 tons for over winter cover)	70-90 lbs.	Free from weeds and coarse matter. Must be anchored. Spread with mulch blower or by hand.
Fiber Mulch	Minimum 1500 lbs	35 lbs.	Do not use as mulch for winter cover or during hot, dry periods.* Apply as slurry
Corn Stalks	4-6- tons	185-275 lbs	Cut or shredded in 4-6" lengths. Air-dried. Do not use in fine turf areas. Apply with mulch blower or by hand.
Wood Chips	4-6 tons	185- 275 lbs.	Free of coarse matter. Air-dried. Treat with 12 lbs nitrogen per ton. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.
Bark Chips Or Shredded Bark	50-70 cu. Yds.	1-2 cu. Yds.	Free of coarse matter. Air-dried. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.
* When fiber mulch is the only available mulch during periods when straw should be used, apply at a minimum rate of 2000 lbs./ac. Or 45 lbs./1000 sq ft.			

LIMING REQUIREMENTS FOR TEMPORARY SITES

pH Test	Recommended Application of Agricultural Limestone
Below 4.2	3 tons per acre
4.2 to 5.2	2 tons per acre
5.2 to 6	1 ton per acre

Source: VA DSWC

SEEDING MIXTURES, RATES, AND DATES: SOUTHERN PIEDMONT AND COASTAL PLAIN

SITE CONDITIONS	SEEDING MIXTURES	RATES		DATES		
		PER ACRE	PER 1000 ft ²	3/1 to 4/15	4/15 to 8/1	8/1 to 10/15
High Maintenance Lawns	1. Tall fescue - 90% Kentucky bluegrass -10%	250 lbs	6 lbs	X	no	X
Low Maintenance General Use	2. Tall fescue - 50% Ladino clover - 10% Red clover - 10% Korean lespedeza - 15% Annual ryegrass - 15%	80 lbs	2 lbs	X	(a,b) X	X
	3. Tall fescue - 50% Sericea lespedeza - 30% Annual ryegrass - 20%	70 lbs	1 ½ lbs	X	(a) X	X
Droughty Areas, Sandy Soils	4. Tall fescue - 50% Sericea lespedeza - 20% Korean lespedeza - 15% Annual ryegrass - 15%	80 lbs	2 lbs	X	(a,b) X	X
Poorly Drained Areas	5. Tall fescue - 65% Korean lespedeza - 20% Annual ryegrass - 10% Redtop - 5%	80 lbs	2 lbs	X	(a,b) X	X

- a) After May 1, use 10 lb/A german millet or 2 lb/A weeping lovegrass in place of annual ryegrass.
 b) After May 1, Korean lespedeza will not reseed itself. You may increase the amount of other legumes accordingly.

**ACCEPTABLE TEMPORARY SEEDING PLANT MATERIALS
 “QUICK REFERENCE FOR ALL REGIONS”**

Planting Dates	Species	Rate (lbs./acre)
Sept. 1 – Feb. 15	50/50 Mix of Annual Ryegrass (<u>Lolium multi-florum</u>) & Cereal (Winter) Rye (<u>Secale cereale</u>)	50 - 100
Feb. 16 – Apr. 30	Annual Ryegrass (<u>Lolium multi-florum</u>)	60 – 100
May 1 – Aug. 31	German Millet (<u>Setaria italica</u>)	50

Source: VA SWCC

Date of Filing _____

APPLICATION FOR LAND DISTURBANCE PERMIT

Filing of this application with required fees, approved plans and required security at the office of the Department of Public Works is necessary to constitute an application for a Land Disturbance Permit.

Application to be completed by the Applicant

Contact Person _____ Phone _____ Fax _____
(First Name) (M.I.) (Last Name)

Email _____ Address _____
(Street and / or P.O. Box) (City) (State) (Zip)

Landowner _____ Phone _____ Fax _____

Email _____ Address _____
(Street and / or P.O. Box) (City) (State) (Zip)

PROJECT TITLE _____

GPIN(S) # _____ Acreage of Land Disturbance _____

Owner's Certification

The undersigned owner certifies that he/she is responsible for complying with the Hanover County Erosion and Sediment Control Program, Ch. 10, Art. 1 of the Hanover County Code, and for complying with the County approved Erosions and Sediment Control Plan for this project. The undersigned owner grants permission for access to the subject property, to Hanover County, its employees and/or agents for the purpose of inspecting and/or completing erosion and sediment control measures. I understand that a final inspection by the Department of Public Works must be requested and all land disturbance found to be in compliance, in order for the security to be released.

Signature of Land Owner Printed Name and Title of Land Owner

Responsible Land Disturber's Certification

The undersigned certifies that he/she is the Responsible Land Disturber for this Project.

(Signature) Date _____

Printed Name _____ Certificate # _____

Address _____

Phone _____ Fax _____ Email _____

PERMIT

(To be completed by the Department of Public Works)

Project Title _____ VSMP Construction Permit: ___ Yes ___ Not Required

Erosion and Sediment Control Plan Approval Date _____ Plan Prepared By _____

Bond Type _____ Bond Number _____ Bond Amount _____

Approved By _____ Date _____
(Director of Public Works or Designee)

Permit Duration _____ Permit Expiration Date _____

THIS PERMIT MUST BE KEPT ON THE WORK SITE AND SHOWN WHEN REQUESTED
Inspection history can be obtained by calling (804) 365-6036 or visiting us on the web at
<https://www.hanovercountyvirginia.org/Click2GovBP/Index.jsp> DPW 11/08/11

HANOVER COUNTY TREE CANOPY CHART

December 23, 1992

Tree Species	Projected Tree Coverage @ 10 Years (Square feet)		
	2" caliper	2 1/2"	3"
Deciduous Trees			
Acer campestre (Hedge Maple)	110	150	175
A. ginnala (Amur Maple)	110	150	175
A. palmatum (Japanese Maple)	110	150	175
A. platanoides (Norway Maple)	175	200	250
A. rubrum (Red Maple)	175	200	250
A. saccharum (Sugar Maple)	175	200	250
Aesculus hippocastanum (Horsechestnut)	125	150	175
Amelanchier arborea (Downey Serviceberry)	100	110	125
A. laevis (Allegheny Serviceberry)	100	110	125
Betula nigra (River Birch)	150	175	200
Carpinus caroliniana (American Hornbeam)	100	110	125
Carya illinoensis (Pecan)	175	200	250
C. ovata (Shagbark Hickory)	125	150	175
Castanea mollissima (Chinese Chestnut)	125	150	175
Celtis occidentalis (Hackberry)	125	150	175
Cercis canadensis (Redbud)	100	110	125
Cercidiphyllum japonicum (Katsuratree)	110	150	175
Chioanthus virginicus (Fringetree)	50	60	75
Cornus florida (Flowering Dogwood)	50	60	75
C. kousa (Kousa Dogwood)	100	110	125
Cotinus coggygria (Smoketree)	50	60	75
Diospyros virginiana (Persimmon)	100	150	175
Elaeagnus angustifolia (Russian Olive)	100	110	125
Fagus grandifolia (American Beech)	150	200	200
F. sylvatica (European Beech)	150	200	250
Fraxinus americana (White Ash)	150	200	250
F. pennsylvanica (Green Ash)			
'Marshall's seedless	140	200	250
'Patmore	140	200	250
'Summit	140	200	250
Gingko biloba (Gingko/Maidenhair Tree)	75	100	125
Gleditsia triacanthus inermis (Thornless Honeylocust)			
'Imperial'	175	200	250
'Skyline'	175	200	250
'Shademaster'	175	200	250
Gymnocladus dioicus (Kentucky Coffeetree)	110	150	175
Juglans nigra (Black Walnut)	125	150	175
Koelreuteria paniculata (Golden Raintree)	75	100	125

<i>Larix decidua</i> (European Larch)	125	150	175
<i>Liquidambar styraciflua</i> (Sweetgum)	125	150	175
<i>Liriodendron tulipifera</i> (Tulip Tree)	175	200	250
<i>Magnolia acuminata</i> (Cucumber Tree)	150	200	250
<i>M. soulangiana</i> (Saucer Magnolia)	75	100	125
<i>M. virginiana</i> (Sweetbay Magnolia)	50	75	100
<i>Malus</i> spp. (Crabapples)	110	150	175
<i>Metasquoia glyptostroboides</i> (Dawn Redwood)	100	150	175
<i>Nyssa sylvatica</i> (Black Gum)	100	150	175
<i>Oxydendron arboreum</i> (Sourwood)	50	60	75
<i>Phellodendron amurense</i> (Armur Corktree)	150	200	250
<i>Platanus acerfolia</i> (London Planetree)	175	200	250
<i>P. Occidentalis</i> (Sycamore)	175	200	250
<i>Prunus cerasifera</i> (Flowering Plum)	50	60	75
<i>P. sargentii</i> (Sargent Cherry)	100	110	125
<i>P. serotina</i> (Black Cherry)	110	150	175
<i>P. serrulata</i> 'Kwanzan' (Kwanzan Cherry)	140	200	250
<i>P. subhirtella</i> (Weeping Japanese Cherry)	110	150	175
<i>P. yedoensis</i> (Yoshino Chery)	110	150	175
<i>Pyrus calleryana</i> (Callery Pear)			
'Aristocrat'	150	200	250
'Autumn Blaze'	150	200	250
'Bradford'	150	200	250
'Chanticleer'	100	110	125
'Redspire'	100	150	175
'Whitehouse'	100	110	125
<i>Quercus acutissima</i> (Sawtooth Oak)	140	200	250
<i>Q. alba</i> (White Oak)	110	150	175
<i>Q. bicolor</i> (Swamp White Oak)	140	200	250
<i>Q. coccinea</i> (Scarlet Oak)	140	200	250
<i>Q. imbricaria</i> (Shingle Oak)	125	150	175
<i>Q. palustris</i> (Pin Oak)	150	200	250
<i>Q. phellos</i> (Willow Oak)	140	200	250
<i>Q. robur</i> 'Fastigiata' (Columnar English Oak)	110	150	175
<i>Q. rubra</i> (Red Oak)	150	200	250
<i>Sophora japonica</i> (Japanese Pagoda Tree)	110	150	175
<i>Stewartia koreana</i> (Korean Stewartia)	50	60	75
<i>S. ovata</i> (Mountain Stewartia)	50	60	75
<i>S. pseudocamellia</i> (Japanese Stewartia)	50	60	75
<i>Styrax japonicus</i> (Japanese Snowball)	50	60	75
<i>Sytinga reticulata</i> (Japanese Tree Lilac)	50	60	75

Tilia americana (American Linden/Basswood)	125	150	175
'Legend'	125	150	175
'Redmond'	125	150	175
T. cordata (Littleleaf Linden)	140	200	250
'Glenleven'	140	200	250
'Greenspire'	140	200	250
Ulmus hollandica 'Groenveldt' (Groenveldt Elm)	150	200	250
U. parvifolia (Lacebark Elm)	140	200	250
Zelkova serrata (Zelkova)	140	200	250

Tree Species	Projected Tree coverage @ 10 Years (Square Feet)	
	6' – 8' height when planted	8' –10' height when planted
Evergreen Trees		
Cedrus atlantica (Atlas Cedar)	150	200
C. deodora (Deodar Cedar)	100	125
Cryptomeria japonica (Japanese Cryptomeria)	100	125
Cupressocyparis leylandi (Leyland Cypress)	100	125
Magnolia grandiflora (Southern Magnolia)	175	250
Picea abies (Norway Spruce)	150	175
P. glauca (White Spruce)	100	125
P. pungens (Colorado Blue Spruce)	100	125
Pinus bungeana (Lace Bark Pine)	150	175
P. echinata (Shortleaf Pine)	150	175
P. nigra (Austrian Pine)	150	175
P. rigida (Pitch Pine)	200	250
P. Strobus (White Pine)	200	250
P. sylvestris (Scotch Pine)	200	250
P. taeda (Loblolly Pine)	200	250
P. thunbergiana (Japanese Black Pine)	150	175
Pseudotsuga menziesii (Douglas Fir)	100	125
Tsuga canadensis (Canadian Hemlock)	100	125
T. carolina (Caroline Hemlock)	100	125

Sources: Henrico County Landscape Manual
Virginia Polytechnic Institute & State University, Hampton Roads Agricultural Experimental Station
Virginia Nurserymen's Association

Adopted 1/7/93

TREES NOT RECOMMENDED FOR USE AS LANDSCAPING

Certain species of trees are less suitable than others in suburban environments due to undesirable characteristics. Although these species may be retained on site in natural setting and may be used to partially satisfy planting requirements, the following species are not recommended for use within the required internal or peripheral landscaping areas:

<i>Acer negundo</i>	box elder
<i>Acer saccharinum</i>	silver maple
<i>Ailanthus altissima</i>	tree of heaven
<i>Albizia julibrissin</i>	mimosa
<i>Betula pendula</i>	white birch
<i>Gingko biloba</i>	gingko (female only)
<i>Maclura pomifera</i>	osage-orange (female only)
<i>Morus species</i>	mulberries
<i>Paulownia tomentosa</i>	empress tree
<i>Populus species</i>	poplars
<i>Salix species</i>	willows
<i>Ulmus Americana</i>	American elm
<i>Ulmus pumila</i>	Siberian elm